

NORTHWEST LABORATORIES

of Seattle, Incorporated

ESTABLISHED 1896

Technical Services for: Industry, Commerce, Legal Profession & Insurance Industry

1530 FIRST AVENUE SOUTH

• SEATTLE, WASHINGTON 98134

• Telephone: (206) 622-0680

Report To: Alaskan Copper

Date: January 5, 1984

Report On: Effluent

Lab No: E 29757

IDENTIFICATION:

Metro Monthly Sample "3600"

ANALYSIS:

pH

6.7

ppm

Cadmium, Cd
Chromium, Cr
Copper, Cu
Nickel, Ni
Lead, Pb
Silver, Ag
Zinc, Zn

<0.1
0.05
0.9
<0.02
<0.3
0.2
2.7

NORTHWEST LABORATORIES

Clyde J. Ambacher
CLYDE J. AMBACHER

cjb

NORTHWEST LABORATORIES

1000 1st Avenue
Seattle, WA 98101

Phone: (206) 462-1000 Fax: (206) 462-1001

Report: January 8, 1998

Lab No: 8 20707

Project: Alaska Canyon

Sample On: Effluent

IDENTIFICATION:

Water Sample "5000"

ANALYSIS:

ppm

0.3

PHYSICAL

<0.1

0.0

0.0

<0.01

<0.1

0.0

S.V.

1.0 mg/L

0.0 mg/L

0.0 mg/L

0.0 mg/L

0.0 mg/L

0.0 mg/L

0.0 mg/L

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1530 FIRST AVENUE SOUTH

SEATTLE, WASHINGTON 98134

Telephone: (206) 622-0680

Report To: Alaskan Copper

Date: February 8, 1984

Report On: Effluent

Lab No: E 29968

IDENTIFICATION:

Metro sump sample (3600) January
2/2/84

ANALYSIS:

pH

10.19

ppm

Cadmium, Cd
Chromium, Cr
Copper, Cu
Nickel, Ni
Lead, Pb
Silver, Ag
Zinc, Zn

<0.03
2.5
0.7
1.8
0.4
<0.03
5.1

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CLYDE J. AMBACHER

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MEMBER SINCE 1948

AKC-0015780

LABORATORY

REPORT

INSTRUCTIONS

1. Sample

2. Sample Description and Location

3. For Analysis In

Date: February 8, 1984

Report To: Alaskan Copper

Lab No: E 50003

Report On: Effluent

IDENTIFICATION:

Water sample (3803) - January
1984

ANALYSIS:

10.18

g/l

ppm

<0.03

Barium, Ca

2.7

Chromium, Cr

0.7

Copper, Cu

1.8

Nickel, Ni

0.4

Lead, Pb

<0.03

Silver, Ag

5.1

Zinc, Zn

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CLIVE J. KIMBLE
1984



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1530 FIRST AVENUE SOUTH

SEATTLE, WASHINGTON 98134

Telephone: (206) 622-0680

Report To: Alaskan Copper Works

Date: February 16, 1984

Report On: Effluent Water

Lab No: E 30049

SUBMITTED:

Metro Monthly Sample (3200) January

ANALYSIS:

pH

8.4

ppm

Cadmium, Cd

<0.03

Chromium, Cr

0.6

Copper, Cu

0.6

Nickel, Ni

0.5

Silver, Ag

<0.03

Lead, Pb

<0.1

Zinc, Zn

0.1

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Sam LeBaron
SAM LEBARRON

cjb

MEMBER SINCE 1942

*These come
with
invoice.
Do you
need them?
I need approval
work has been done*

Amth

AKC-0015782

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1530 FIRST AVENUE SOUTH

SEATTLE, WASHINGTON 98134

Telephone: (206) 622-0680

Report To: Alaskan Copper

Date: March 13, 1984

Report On: Effluent
PO A1930

Lab No: E 30195

IDENTIFICATION:

Metro sump sample
3200
February, 1984

ANALYSIS:

pH

8.7

ppm

Cadmium, Cd
Chromium, Cr
Copper, Cu
Nickel, Ni
Lead, Pb
Silver, Ag
Zinc, Zn

<0.04

0.4

0.2

0.3

<0.1

0.1

1.1

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Clyde J. Ambacher
CLYDE J. AMBACHER

KP

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AKC-0015784

STATE OF ALASKA

DEPARTMENT OF ENVIRONMENT

Division of Environmental Protection
1000 North Steese Avenue
Juneau, Alaska 99801

Date: March 18, 1998
Lab No: E 30198

Report To: Alaskan Copper
Report On: Effluent
To: 41330

ANALYSIS:

Water Temp: 10.0
pH: 7.5
Dissolved Oxygen: 10.0

RESULTS:

6.7

pH

<0.04
0.4
0.3
0.3
<0.1
0.1
1.1

1.1
0.1
0.1
0.1
0.1
0.1
0.1

NORTHWEST LABORATORIES

State of Alaska
Division of Environmental Protection
Juneau, Alaska



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1530 FIRST AVENUE SOUTH

• SEATTLE, WASHINGTON 98134 •

Telephone: (206) 622-0680

Report To: Alaskan Copper & Brass

Date: April 18, 1984

Report On: Acid Pickling Solution

Lab No.: E 30471

SUBMITTED:

3 Samples of Acid

IDENTIFICATION:

Sample #1 Nitric Solution 4/11/84 "619"
Sample #2 Nitric Solution 4/11/84 "3200"
Sample #3 Nitric Solution 4/11/84 "3600"

ANALYSIS:

	<u>Sample #1</u>	<u>Sample #2</u>	<u>Sample #3</u>
Specific Gravity, 60° F/60° F	1.107	1.147	1.104
Acid (as nitric acid), %	7.36	8.66	7.80

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1530 FIRST AVENUE SOUTH

• SEATTLE, WASHINGTON 98134 •

Telephone: (206) 622-0680

Report To: Alaskan Copper

Date: May 4, 1984

Report On: Effluent

Lab No: E 30566

IDENTIFICATION:

Metro sump sample
3600
April, 1984

ANALYSIS:

pH

9.0

ppm

Cadmium, Cd
Chromium, Cr
Copper, Cu
Nickel, Ni
Lead, Pb
Silver, Ag
Zinc, Zn

<0.05
0.3
0.3
0.2
<0.1
0.08
0.7

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1530 FIRST AVENUE SOUTH

SEATTLE, WASHINGTON 98134

Telephone: (206) 622-0680

Report To: Alaskan Copper

Date: June 28, 1984

Report On: Sludge PO No. 2504

Lab No: E 30666

SUBMITTED:

One Sample of sludge material

ANALYSIS:

pH	8.64
Physical State	Slurry
Density	1.11g/ml as received

Sulfur, S, %	0.19
Water, %	77.31
Solids, %	22.69

	<u>Mg/Kg</u>	<u>%</u>
Iron, Fe,	27271	2.73
Calcium, Ca,	2097	0.21
Chromium, Cr	3577	0.36
Manganese, Mn,	798	0.08
Nickel, Ni,	4597	0.46
Copper, Cu,	9683	0.97
Silicon, Si,	35	

Reactivity -- non-explosive and non-reactive when mortared, mixed with water, or heated.

NORTHWEST LABORATORIES


SAM LEBARRON

KP

AKC-0015788

Laucks

Testing Laboratories, Inc.

940 South Harney Street, Seattle, Washington 98108 (206) 767-5060

Chemistry, Microbiology, and Technical Services



Certificate

CLIENT

Alaskan Copper & Brass
3200-6th Ave. S.
Seattle, WA 98134
ATTN: Jim Brown

LABORATORY NO.

85004

DATE

June 14, 1984

PO #A-2872

REPORT ON

WATER

SAMPLE
IDENTIFICATION

Sample submitted 6-12-84

TESTS PERFORMED
AND RESULTS:


	<u>parts per million (mg/L)</u>
Chromium	3.0
Copper	.85
Nickel	1.7
Cadmium	L/0.002
Lead	.23
Zinc	.071

Key

L/ indicates "less than"

Respectfully submitted,

Laucks Testing Laboratories, Inc.


J. M. Owens

JMO:rtv



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AKC-0015789